



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of

KATO

Atty. Ref.: 914-108

Serial No. 09/496,038

Group: 2681

Filed: February 1, 2000

Examiner: Davis, T.

For: SATELLITE BROADCASTING RECEIVER RECEIVING SIGNAL RADIO WAVES
FROM TWO BROADCASTING SATELLITES

* * * * *

October 14, 2004

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

SUPPLEMENTAL AMENDMENT/RESPONSE

Further to the Amendment/Response filed September 8, 2004, please enter the
following amendments.

KATO

Application No. 09/496,038

October 14, 2004

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (previously presented) A satellite broadcasting receiver receiving signal radio waves from respective broadcasting satellites, comprising:

first to nth (where n is an integer equal to or larger than 2) amplifiers respectively amplifying first to nth signals extracted from said signal radio waves from the respective broadcasting satellites;

a connection node supplied with outputs from said first to nth amplifiers; and

a power supply control circuit controlling said first to nth amplifiers to set a current flowing through one of said first to nth amplifiers at a prescribed value and set currents flowing through all the other amplifiers at 0 such that an output from said one amplifier is transmitted through said connection node.

2. (original) The satellite broadcasting receiver according to claim 1, further comprising a (n+1)th amplifier for amplifying an output transmitted from said connection node.

3. (original) The satellite broadcasting receiver according to claim 2, wherein each of said first to (n+1)th amplifiers includes a high electron mobility transistor.

4. (original) The satellite broadcasting receiver according to claim 2, further comprising a frequency converting circuit converting an output from said (n+1)th amplifier to an intermediate frequency signal.

5. (previously presented) A satellite broadcasting receiver receiving signal radio waves from broadcasting satellites, comprising:

first to fourth amplifiers respectively amplifying first to fourth signals extracted from said signal radio waves;

a first connection node supplied with outputs from said first and second amplifiers;

a second connection node supplied with outputs from said third and fourth amplifiers;

a third connection node supplied with outputs from said first and second connection nodes;

a fifth amplifier amplifying an output transmitted from said third connection node;

a power supply control circuit controlling said first to fourth amplifiers to set a current flowing through one of said first to fourth amplifiers at a prescribed value and set currents flowing through all the other amplifiers at 0 such that an output from said one amplifier is transmitted to said fifth amplifier through said third connection node.

6. (original) The satellite broadcasting receiver according to claim 5, wherein each of said first to fifth amplifiers includes a high electron mobility transistor.

KATO

Application No. 09/496,038

October 14, 2004

7. (original) The satellite broadcasting receiver according to claim 5, further comprising a frequency converting circuit converting an output from said fifth amplifier to an intermediate frequency signal.

8. (previously presented) The satellite broadcasting receiver according to claim 5, further comprising:

sixth to ninth amplifiers respectively amplifying fifth to eighth signals extracted from said signal radio waves;

a fourth connection node supplied with outputs from said sixth and seventh amplifiers;

a fifth connection node supplied with outputs from said eighth and ninth amplifiers;

a sixth connection node supplied with outputs from said fourth and fifth connection node;

a tenth amplifier amplifying an output transmitted from said sixth connection node; and

a seventh connection node supplied with outputs from said fifth and tenth amplifiers, wherein

said power supply control circuit controls said sixth to ninth amplifiers to set a current flowing through one of said sixth to ninth amplifiers at a prescribed value and set currents flowing through all the other amplifiers at 0 such that an output from said one amplifier is transmitted to said tenth amplifier through said sixth connection node, and controls said fifth and tenth amplifiers to set currents flowing through said fifth and tenth amplifiers respectively at a prescribed value and 0 such that an output from said fifth amplifier is

KATO

Application No. 09/496,038

October 14, 2004

transmitted through said seventh connection node and set currents flowing through said fifth and tenth amplifiers respectively at 0 and a prescribed value such that an output from said tenth amplifier is transmitted through said seventh connection node.

9. (original) The satellite broadcasting receiver according to claim 8, wherein each of said sixth to tenth amplifiers includes a high electron mobility transistor.

10. (original) The satellite broadcasting receiver according to claim 8, further comprising a frequency converting circuit converting an output from said seventh connection node to an intermediate frequency signal.

11. (previously presented) A satellite broadcasting receiver receiving signal radio waves from broadcasting satellites, comprising:

first to fourth amplifiers respectively amplifying first to fourth signals extracted from said signal radio waves;

a first connection node supplied with outputs from said first and second amplifiers;

a second connection node supplied with outputs from said third and fourth amplifiers;

a fifth amplifier amplifying an output transmitted from said first connection node;

a sixth amplifier amplifying an output transmitted from said second connection node;

a third connection node supplied with outputs from said fifth and sixth amplifiers; and

a power supply control circuit controlling said first to fourth amplifiers to set a current flowing through one of said first to fourth amplifiers at a prescribed value and set currents flowing through all the other amplifiers at 0 such that an output from said one amplifier is

KATO

Application No. 09/496,038

October 14, 2004

transmitted to said fifth or sixth amplifier through said first or second connection node, and controlling said fifth and sixth amplifiers to set currents flowing through said fifth and sixth amplifiers respectively at a prescribed value and 0 such that an output from said fifth amplifier is transmitted through said third connection node and set currents flowing through said fifth and sixth amplifiers respectively at 0 and a prescribed value such that an output from said sixth amplifier is transmitted through said third connection node.

12. (original) The satellite broadcasting receiver according to claim 11, wherein each of said first to sixth amplifiers includes a high electron mobility transistor.

13. (original) The satellite broadcasting receiver according to claim 11, further comprising a frequency converting circuit converting an output from said third connection node to an intermediate frequency signal.

14. (previously presented) A satellite broadcasting receiving system receiving signal radio waves from broadcasting satellites, comprising
first and second satellite broadcasting receivers, each including
first to fourth amplifiers respectively amplifying first to fourth signals extracted from said signal radio waves,
a first connection node supplied with outputs from said first and second amplifiers,
a second connection node supplied with outputs from said third and fourth amplifiers,
a third connection node supplied with outputs from said first and second connection nodes,

KATO

Application No. 09/496,038

October 14, 2004

a fifth amplifier amplifying an output transmitted from said third connection node,
a power supply control circuit controlling said first to fourth amplifiers to set a current flowing through one of said first to fourth amplifiers at a prescribed value and set currents flowing through all the other amplifiers at 0 such that an output from said one amplifier is transmitted to said fifth amplifier through said third connection node, and
a frequency converting circuit converting an output from said fifth amplifier to an intermediate frequency signal,
said system further comprising
an integrally formed waveguide shared by said first and second satellite broadcasting receivers.

15. (previously presented) A satellite broadcasting receiving system receiving signal radio waves from broadcasting satellites, comprising
first and second satellite broadcasting receivers, each including
first to fourth amplifiers respectively amplifying first to fourth signals extracted from said signal radio waves,
a first connection node supplied with outputs from said first and second amplifiers,
a second connection node supplied with outputs from said third and fourth amplifiers,
a third connection node supplied with outputs from said first and second connection nodes,
a fifth amplifier amplifying an output transmitted from said third connection node,
and

KATO

Application No. 09/496,038

October 14, 2004

a frequency converting circuit converting an output from said fifth amplifier to an intermediate frequency signal,

said system further comprising

a power supply control circuit controlling said first to fourth amplifiers to set a current flowing through one of said first to fourth amplifiers at a prescribed value and set currents flowing through all the other amplifiers at 0 such that an output from said one amplifier is transmitted to said fifth amplifier through said third connection node,

first and second output terminals,

a switching circuit controlled by said power supply control circuit for selectively switching outputs from said frequency converting circuits of said first and second satellite broadcasting receivers and applying said outputs to said first and second output terminals, and

an integrally formed waveguide shared by said first and second satellite broadcasting receivers.

16. (original) The satellite broadcasting receiving system according to claim 15, wherein each of said first to fifth amplifiers in each of said first and second satellite broadcasting receivers includes a high electron mobility transistor.

17. (previously presented) A satellite broadcasting receiving system receiving signal radio waves from broadcasting satellites, comprising
first and second satellite broadcasting receivers, each including

KATO

Application No. 09/496,038

October 14, 2004

first to fourth amplifiers respectively amplifying first to fourth signals extracted from said signal radio waves,

a first connection node supplied with outputs from said first and second amplifiers,

a second connection node supplied with outputs from said third and fourth amplifiers,

a third connection node supplied with outputs from said first and second connection nodes, and

a fifth amplifier amplifying an output transmitted from said third connection node,

said system further comprising

a power supply control circuit controlling said first to fourth amplifiers to set a current flowing through one of said first to fourth amplifiers at a prescribed value and set currents flowing through all the other amplifiers at 0 such that an output from said one amplifier is transmitted to said fifth amplifier through said third connection node,

first and second frequency converting circuits each converting an applied amplifier output to an intermediate frequency signal,

a switching circuit controlled by said power supply control circuit for selectively switching outputs from respective said fifth amplifiers of said first and second satellite broadcasting receivers and applying the outputs to said first and second frequency converting circuits, and

an integrally formed waveguide shared by said first and second satellite broadcasting receivers.

KATO

Application No. 09/496,038

October 14, 2004

18. (original) The satellite broadcasting receiving system according to claim 17, wherein each of said first to fifth amplifiers in each of said first and second satellite broadcasting receivers includes a high electron mobility transistor.

19. (previously presented) A satellite broadcasting receiving system receiving signal radio waves from broadcasting satellites, comprising
first and second satellite broadcasting receivers, each including
first to fourth amplifiers respectively amplifying first to fourth signals extracted from said signal radio waves,
a first connection node supplied with outputs from said first and second amplifiers,
a second connection node supplied with outputs from said third and fourth amplifiers,
a third connection node supplied with outputs from said first and second connection nodes, and
a fifth amplifier amplifying an output transmitted from said third connection node,
said system further comprising
a power supply control circuit controlling said first to fourth amplifiers to set a current flowing through one of said first to fourth amplifiers at a prescribed value and setting currents flowing all the other amplifiers at 0 such that an output from said one amplifier is transmitted to said fifth amplifier through said third connection node,
a frequency converting circuit converting an applied amplifier output to an intermediate frequency signal,

KATO

Application No. 09/496,038

October 14, 2004

a switching circuit controlled by said power supply control circuit for selectively switching an output from said fifth amplifier of said first or second satellite broadcasting receiver and applying it to said frequency converting circuit, and

an integrally formed waveguide shared by said first and second satellite broadcasting receivers.

20. (original) The satellite broadcasting receiving system according to claim 19, wherein each of said first to fifth amplifiers in each of said first and second satellite broadcasting receivers includes a high electron mobility transistor.

21. (currently amended) A satellite broadcasting receiver receiving a signal radio waves from a-respective broadcasting satellites, comprising:

first to nth (where n is an integer equal to or larger than 2) amplifiers respectively amplifying first to nth signals extracted from said signal radio waves, the first to nth signals comprising different components of said signal radio waves;

a connection node supplied with outputs from said first to nth amplifiers; and

a power supply control circuit controlling said first to nth amplifiers to set a current flowing through one of said first to nth amplifiers at a prescribed value and set currents flowing through all the other amplifiers at 0 such that an output from said one amplifier is transmitted through said connection node.

22. (original) The satellite broadcasting receiver according to claim 21, wherein one of the first to nth signals comprises a horizontal polarization component of the

KATO

Application No. 09/496,038

October 14, 2004

signal radio wave and another of the first to nth signals comprises a vertical polarization component of the signal radio wave.

23. (original) The satellite broadcasting receiver according to claim 21, further comprising a (n+1)th amplifier for amplifying an output transmitted from said connection node.

24. (original) The satellite broadcasting receiver according to claim 23, wherein each of said first to (n+1)th amplifiers includes a high electron mobility transistor.

25. (original) The satellite broadcasting receiver according to claim 23, further comprising a frequency converting circuit converting an output from said (n+1)th amplifier to an intermediate frequency signal.

26. (previously presented) A satellite broadcasting receiver receiving signal radio waves from respective broadcasting satellites, comprising:

first to nth (where n is an integer equal to or larger than 2) amplifiers respectively amplifying first to nth signals extracted from said signal radio waves;

a connection node supplied with outputs from said first to nth amplifiers; and

a power supply control circuit controlling said first to nth amplifiers to set a current flowing through one of said first to nth amplifiers at a prescribed value and set currents flowing through all the other amplifiers at 0 such that an output from said one amplifier is transmitted through said connection node;

KATO

Application No. 09/496,038

October 14, 2004

wherein the first to n th signals are provided to the first to n th amplifiers through respective first to n th signal input lines, the first to n th signal input lines not being connected to a common connection node.

27. (original) The satellite broadcasting receiver according to claim 26, further comprising a $(n+1)$ th amplifier for amplifying an output transmitted from said connection node.

28. (original) The satellite broadcasting receiver according to claim 27, wherein each of said first to $(n+1)$ th amplifiers includes a high electron mobility transistor.

29. (original) The satellite broadcasting receiver according to claim 27, further comprising a frequency converting circuit converting an output from said $(n+1)$ th amplifier to an intermediate frequency signal.

KATO

Application No. 09/496,038

October 14, 2004

REMARKS/ARGUMENTS

Reconsideration and allowance of this application are respectfully requested.

Currently, claims 1-29 are pending in this application. This Supplemental Amendment provides an amendment to claim 21. The Remarks/Arguments of the Amendment/Response filed September 8, 2004 are incorporated herein.

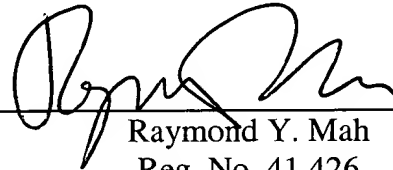
Conclusion:

Applicant believes that this entire application is in condition for allowance and respectfully requests a notice to this effect. If the Examiner has any questions or believes that an interview would further prosecution of this application, the Examiner is invited to telephone the undersigned.

Respectfully submitted,

NIXON & VANDERHYE P.C.

By: _____



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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of

Atty Dkt. 914-108

C# M#

KATO

TC/A.U.

2681

Serial No. 09/496,038

Examiner: Davis, T.

Filed: February 1, 2000

Date: October 14, 2004

Title: SATELLITE BROADCASTING RECEIVER RECEIVING SIGNAL RADIO WAVES
FROM TWO BROADCASTING SATELLITESCommissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

RESPONSE/AMENDMENT/LETTER

This is a response/amendment/letter in the above-identified application and includes an attachment which is hereby incorporated by reference and the signature below serves as the signature to the attachment in the absence of any other signature thereon.

☐ **Correspondence Address Indication Form Attached.****Fees are attached as calculated below:**

Total effective claims after amendment 29 minus highest number
previously paid for 29 (at least 20) = 0 x \$ 18.00 \$ 0.00

Independent claims after amendment 9 minus highest number
previously paid for 9 (at least 3) = 0 x \$ 88.00 \$ 0.00

If proper multiple dependent claims now added for first time, add \$300.00 (ignore improper) \$ 0.00

Petition is hereby made to extend the current due date so as to cover the filing date of this
paper and attachment(s) (\$110.00/1 month; \$430.00/2 months; \$980.00/3 months) \$ 430.00

Terminal disclaimer enclosed, add \$ 110.00 \$ 0.00

☐ First/second submission after Final Rejection pursuant to 37 CFR 1.129(a) (\$790.00) \$ 0.00

☐ Please enter the previously unentered, filed

☐ Submission attached

Subtotal \$ 430.00

If "small entity," then enter half (1/2) of subtotal and subtract -\$ 0.00

☐ Applicant claims "small entity" status. ☐ Statement filed herewith

Rule 56 Information Disclosure Statement Filing Fee (\$180.00) \$ 0.00

Assignment Recording Fee (\$40.00) \$ 0.00

Less 1 month extension previously paid on September 8, 2004 -\$ 110.00

TOTAL FEE ENCLOSED \$ 320.00

The Commissioner is hereby authorized to charge any deficiency, or credit any overpayment, in the fee(s) filed, or asserted to be filed, or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Account No. 14-1140. A duplicate copy of this sheet is attached.

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By Atty: Raymond Y. Mah, Reg. No. 41,426

Signature: 

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